### Claims

### We claim:

# 1. A peptide of Formula (I)

# Z-RHYLNLVTRQRY-NH<sub>2</sub> (SEQ ID NO: 1)

(l)

wherein

PCT/US2004/039216 WO 2005/053726

$$H_2N$$
 $H_2N$ 
 $H_2N$ 
 $H_2N$ 
 $H_3N$ 
 $H_3N$ 

#### A peptide of Formula (II) 2.

# Z-HYLNLVTRQRY-NH<sub>2</sub> (SEQ ID NO:2) (11)

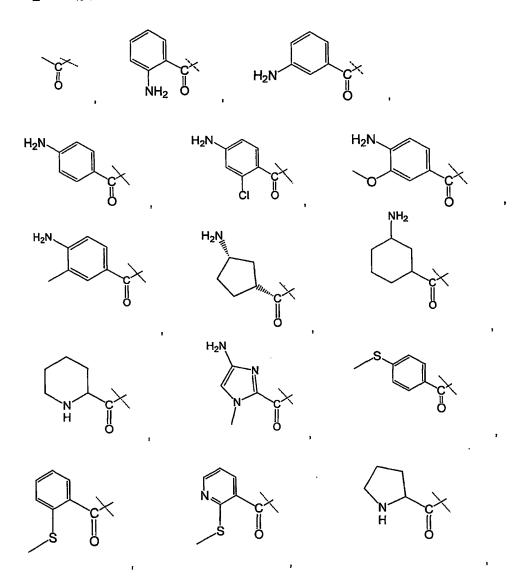
### wherein

$$H_2N$$
 $H_2N$ 
 $H_2N$ 
 $H_2N$ 
 $H_2N$ 
 $H_2N$ 
 $H_2N$ 
 $H_2N$ 

# 3. A peptide of Formula (III)

# $\begin{tabular}{ll} $Z$-YLNLVTRQRY-NH_2$ (SEQ ID NO:3) \\ (III) \end{tabular}$

wherein



$$H_2N$$
 $H_2N$ 
 $H_2N$ 
 $H_2N$ 
 $H_3N$ 
 $H_4$ 
 $H_5$ 
 $H_5$ 
 $H_7$ 
 $H_7$ 

### 4. A peptide of Formula (IV)

wherein

# 5. A peptide of Formula (V)

# Z-NLVTRQRY-NH₂ (SEQ ID NO:5) (V)

### wherein

- 6. The peptide of any one of claims 1 to 5, wherein said peptide is PEGylated.
- 7. A pharmaceutical composition comprising a therapeutically effective amount of a peptide of any one of claims 1 to 5, in combination with a pharmaceutically acceptable carrier.
- 8. A pharmaceutical composition comprising a therapeutically effective amount of a peptide of any one of claims 1 to 5, in combination with a pharmaceutically acceptable carrier and one or more pharmaceutical agents.
- The pharmaceutical composition of claim 8, wherein said pharmaceutical agent is an antiobesity agent selected from the group consisting of β-3 agonists, CB-1 antagonists, appetite suppressants, and lipase inhibitors.
- The pharmaceutical composition of claim 8, wherein said pharmaceutical agent is an agent for the treatment of diabetes selected from the group consisting of insulin, insulin derivatives, PPAR ligands, sulfonylurea drugs, α-glucosidase inhibitors, biguanides, PTP-1B inhibitors, DPP-IV inhibitors, 11-beta-HSD inhibitors, GLP-1 and GLP-1 derivatives, GIP and GIP derivatives, PACAP and PACAP derivatives, and secretin and secretin derivatives.

11. The pharmaceutical composition of claim 8, wherein said pharmaceutical agent is an agent for the treatment of lipid disorders selected from the group consisting of HMG-CoA inhibitors, nicotinic acid, fatty acid lowering compounds, lipid lowering drugs, ACAT inhibitors, bile sequestrants, bile acid reuptake inhibitors, microsomal triglyceride transport inhibitors, and fibric acid derivatives.

- 12. The pharmaceutical composition of claim 8, wherein said pharmaceutical agent is an anti-hypertensive agent selected from the group consisting of β-blockers, calcium channel blockers, diuretics, renin inhibitors, ACE inhibitors, AT-1 receptor antagonists, ET receptor antagonists, and nitrates.
- 13. A method of treating obesity comprising the step of administering to a subject in need thereof a therapeutically effective amount of a peptide of any one of claims 1 to 5 or a composition of claim 7.
- 14. A method of inducing weight loss comprising the step of administering to a subject in need thereof a therapeutically effective amount of a peptide of any one of claims 1 to 5 or a composition of claim 7.
- 15. A method of preventing weight gain comprising the step of administering to a subject in need thereof a therapeutically effective amount of a peptide of any one of claims 1 to 5 or a composition of claim 7.
- 16. A method of treating obesity-related disorders comprising the step of administering to a subject in need thereof a therapeutically effective amount of a peptide of any one of claims 1 to 5 or a composition of claim 7.
- 17. The method of claim 16, wherein said obesity-related disorder is selected from the group consisting of dyslipidemia, cholesterol gallstones, gallbladder disease, gout, cancer, menstrual abnormalities, infertility, polycystic ovaries, osteoarthritis, sleep apnea, hypertriglyceridemia, Syndrome X, type 2 diabetes, atherosclerotic diseases, hyperlipidemia, hypercholesteremia, low HDL levels, hypertension, cardiovascular disease, coronary heart disease, coronary artery disease, cerebrovascular disease, stroke, and peripheral vessel disease.
- 18. A method of treating obesity comprising the step of administering to a subject in need thereof a therapeutically effective amount of a peptide of any one of claims 1 to 5 in combination with one or more pharmaceutical agents.
- 19. The method of claim 18, wherein the peptide of any one of claims 1 to 5 and one or more pharmaceutical agents are administered as a single pharmaceutical dosage formulation.

20. A method of treating obesity comprising the step of administering to a subject in need thereof a therapeutically effective amount of a composition of claim 8, 9, 10, 11, or 12.

- 21. A method of treating obesity-related disorders comprising the step of administering to a subject in need thereof a therapeutically effective amount of a composition of claim 8, 9, 10, 11, or 12.
- 22. Peptides according to any one of claims 1 to 5 for the treatment and/or prophylaxis of obesity and obesity-related disorders.
- 23. Medicament containing at least one peptide according to any one of claims 1 to 5 in combination with at least one pharmaceutically acceptable, pharmaceutically safe carrier or excipient.
- 24. Use of peptides according to any one of claims 1 to 5 for manufacturing a medicament for the treatment and/or prophylaxis of obesity and obesity -related disorders.
- 25. Medicaments according to claim 23 for the treatment and/or prophylaxis of obesity.